

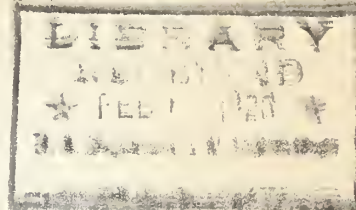
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THE EXTENSION HORTICULTURIST

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Since there have been so many calls for information on the organization and operation of orchard spray rings, this supplement was prepared to meet this need. Orchard spray rings are saving hundreds of home and farm orchards. Spray rings are not limited to orchard work, there are a few potato spray rings and spray rings may be formed for any of the vegetable crops grown in commercial quantity. Vegetable spray rings may be organized and conducted like orchard spray rings, but the basis of prorating each member's expense would probably be on an acre, or fraction of an acre, unit.

Office of Horticultural and Pomological Investigations
and States Relations Service cooperating,
U. S. Department of Agriculture,
Washington, D. C.

The Orchard Spray Ring.

An orchard spray ring is an organization of a few men for the purpose of having their orchards sprayed. Hundreds of farm and home orchards have gone out of existence from lack of spraying, primarily. Spraying fruit trees is troublesome at best, as it requires spraying equipment and materials, and must be done at certain definite times with mixtures made just right to be effective in controlling diseases and insects. Thus the owner of a small orchard easily excuses himself for not spraying it.

History of Orchard Spray Rings.

The orchard spray ring was originated in Iowa in 1919 by County Agent W. O. Brunt of Benton County. In 1920, 26 county agents in Iowa organized 137 orchard spray rings with 657 members. In 1922, the county agents of Iowa reported 654 orchard spray rings in operation, 213 using power sprayers and 441 using barrel pumps.

Several of the other States have started a few orchard spray rings and the work will doubtless be extended each year. Eight States reported orchard spray rings in 1921.

How the Orchard Spray Ring is Organized.

The organization of an orchard spray ring may be very simple, or it may be complex. Two or more neighbors may agree verbally to form an orchard spray ring and help each other spray their trees. They may jointly buy a barrel pump or power sprayer and either appoint one man to run it, or they may pass it along for each one to do his own spraying with it. The members may trade work in doing their spray-

ing. A better way is to appoint a member, or someone outside the ring who understands spraying, to have charge of the spray outfit and spray materials, and either do or supervise all of the actual spraying and be responsible for the upkeep of the outfit for the whole year.

Some orchard spray rings are organized under signed agreements, with or without a constitution and by-laws, but with a president, manager, and treasurer. To raise money to buy the sprayer and materials, shares of stock may be issued for members to purchase, or they may jointly or individually sign a note or notes for discounting at a bank, to raise the money, or they may pro-rate the anticipated cost and raise the cash individually.

Amount of Funds Necessary.

The amount of funds necessary to start an orchard spray ring will naturally depend upon the number of members and size of orchards. In rings of only a few small orchards a good barrel pump with two 25-foot leads of hose, extension rods, nozzles, etc., may cost around \$50. For rings with larger orchards, a good power sprayer is necessary costing between \$300 and \$500. Each ring will need to decide upon its own needs and it is better to err in getting a sprayer too large than too small. A spraying pressure of about 300 pounds should be maintained.

Number of Members.

Some orchard spray rings have as many as 20 members. Ten or twelve members are about as many as can be served satisfactorily with

one sprayer unless the orchards are small and near together. Have the spray ring orchards as near together as possible so as not to lose much time on the road driving from one to another. The different spring and summer sprays must be applied within a few days, or a week, and some allowance should be made for bad weather. A large hand pump will take care of 200 trees. A small power sprayer will handle 750 trees, a very large power sprayer will spray 1,000 to 1,200 trees. In fact, the number of trees will help determine how many members may be included in the ring. The driving distance to all orchards in the ring should not exceed 10 miles.

Cost per Tree.

The average cost per tree for materials and application in several hundred spray rings using power sprayers has been from 65 to 80 cents. The cost per tree when hand pumps were used was higher, running as high as \$1.25 or more per tree.

Advantages of the Spray Ring.

The advantages of the spray ring are that the orchard gets sprayed and at the right time with the right mixtures. Probably the dead wood and a few crowding limbs will be taken out so the spraying can be more thoroughly done. The owner is relieved of the worry of spraying, the individual expense of equipment, the making of spray mixtures, the need of accurate knowledge of fruit tree diseases and insects and just when and what to spray with, and can put full time on his other farm work. Then too, ^{the} spray ring develops the cooperative spirit among farmers and may well lead to greater cooperative effort.

In fact, if there is a surplus crop of fruit the spray ring organization may be used to market it. The greatest advantage of the spray ring is that it is the salvation of the home and farm orchards.

Home and Farm Orchards.

A distinction has been made between the home orchard and farm orchard, and this should be kept in mind. A home orchard is one just large enough to provide fruit for the family while a farm orchard is larger and produces a surplus above family needs. The farm orchards are really semi-commercial and the surplus crop is not always disposed of at a profit. The spray ring organization may be used in disposing of the surplus crops jointly. This may be carried so far as to open up fruit salesrooms in towns and cities. Local merchants may be induced to handle good fruit only and that in convenient packages, or in bulk, at moderate prices, supplies being furnished as needed. Utilization of culls might be started by making cider, vinegar, fruit butters, jellies, etc.

Constitution and By-Laws.

The following outline is suggested as an aid in organizing a spray ring, but details are omitted because they will vary according to the wishes of the members:

Constitution

Article I.

The name of this orchard spray ring shall be _____

Article II.

The object of (name of spray ring here) shall be to purchase a power or hand sprayer and other necessary equipment, spray materials, etc., and to spray the orchards of its members.



Article III.

The officers shall be a president, vice-president, and secretary-treasurer. These officers shall be the executive committee of the spray ring. These officers shall be elected annually.

Article IV.

This constitution may be amended by a majority vote of the members at any meeting.

By-Laws.

Section 1. The duties of the officers shall be as follows:

President - to call meetings, preside at meetings, and do the usual duties of a president.

Vice-President - to fill the office of president when president is absent.

Secretary-Treasurer - to keep all records, collect and disburse funds, issue calls for meetings, and do the usual routine and special business of the office.

Executive Committee - to work out the financial details and conduct the business of the spray ring, employ a manager (who may be one of the executive committee), raise the necessary funds, purchase equipment and supplies, determine and direct the policy and do all other business of the spray ring.

Section 2. A majority of the members of the spray ring shall constitute a quorum to do business.

Section 3. Each member is to furnish the secretary a record of crop yields stating the amount of good clean fruit and culls.

